CLAIMS

What is claimed is:

1. 1.   A method of transferring data between a computer and a non-volatile storage device, both

2. said computer and said storage device coupled to a network, comprising:

3.   (a)   encrypting the data;

4.   (b)   transmitting the encrypted data across a network to the storage device; and

5.   (c)   storing the encrypted data on the storage device.

1. 2.   The method of claim 1 wherein (b) also includes creating a header containing destination

2. information pertaining to the storage device and transmitting the encrypted data in conjunction

3. with the header.

1. 3.   The method of claim 2 wherein the header or footer contains cryptographic metrics on the

2. data.

1. 4.   The method of claim 2 wherein (c) includes removing the header before storing the

2. encrypted data on the storage device.

1. 5.   The method of claim 4 wherein the header or footer contains cryptographic metrics for the

2. data and using said metrics to validate the integrity/authenticity of the data prior to storing the

3. encrypted data on the storage device.

1   6.   The method of claim 1 further including retrieving the encrypted data from the storage

2   device and transmitting said encrypted data to the computer.

1   7.   The method of claim 6 further including receiving the encrypted data at the computer and

2   decrypting the encrypted data received by the computer.

1   8.   The method of claim 6 further including transmitting said encrypted data to the computer

2   with a header that provides routing information pertaining to the computer.

9.   The method of claim 1 further including retrieving the encrypted data from the storage

device, encrypting the encrypted data with a pre-determined key, and transmitting the twice

encrypted data to the computer.

10.   The method of claim 9 further including twice decrypting the twice encrypted data received

by the computer.

1   11.   A method of transferring data between a computer and a nonvolatile storage device, both

2   said computer and said storage device coupled to a network, comprising:

3   (a)   retrieving encrypted data from the storage device;

4   (b)   transmitting the encrypted data across a network from the storage device to the

5   computer; and

6   (c)   receiving the encrypted data at the computer;

7   (d)   decrypting the encrypted data received in (c).

1   12.   The method of claim 11 wherein (b) also includes creating a header containing destination

2   information pertaining to the computer and transmitting the encrypted data in conjunction with the

3   header.

1   13.   The method of claim 11 further including removing the header before decrypting the

2   encrypted data received in (c).

1   14.   The method of claim 11 further including:

        (e)   encrypting data by a computer;

        (f)   transmitting the encrypted data from the computer across a network to the storage

device; and

        (g)   storing the encrypted data on the storage device.

15.   The method of claim 14 wherein (f) also includes creating a header containing destination

information pertaining to the storage device and transmitting the encrypted data in conjunction

3   with the header.

1   16.   The method of claim 15 wherein (g) includes removing the header before storing the

2   encrypted data on the storage device.

1   17.   The method of claim 11 further including encrypting the encrypted data retrieved from the

2   storage device in (a) and, in (b) transmitting the twice encrypted data across the network to the

3   computer, and in (c) receiving the twice encrypted data.

1   18.   The method of claim 17 wherein (d) includes twice decrypting the twice encrypted data

2   received in (c).

1   19.   A computer system, comprising:

2   a computer; and

3   a nonvolatile storage device external to said computer and coupled to said computer over a

4   network;

5   wherein said computer sends encrypted data to said storage device over said network and

6   said storage device stores the data in encrypted form.

1   20.   The computer system of claim 19 wherein said computer sends said encrypted data to said

2   storage device with a header that contains destination information pertaining to the storage device.

1   21.   The computer system of claim 20 wherein said storage device removes the header before

2   storing the encrypted data.

1   22.   The computer system of claim 20 wherein said storage device retrieves encrypted data from

2   storage and transmits said encrypted data to the computer over the network.

1   23.   The computer system of claim 22 wherein said computer receives the encrypted data at the

2   computer from the storage device and said computer decrypts the encrypted data.

1   24.   The computer system of claim 22 wherein said storage device transmits said encrypted with

2   a header that provides routing information pertaining to the computer.

1   25.   The computer system of claim 20 wherein said storage device retrieves encrypted data from

2   storage therein, encrypts said encrypted data and transmits the twice encrypted data to the

3   computer.

26.   The computer system of claim 25 wherein said computer twice decrypts the twice

encrypted data transmitted to the computer by the storage device.

27.   A computer system, comprising:

a computer; and

a nonvolatile storage device external to said computer and coupled to said computer over a

4   network;

5   wherein said storage device retrieves encrypted data stored therein, transmits the encrypted

6   data across the network to said computer wherein the computer receives and

7   decrypts the encrypted data.

1   28.   The computer system of claim 27 wherein said storage device creates a header containing

2   destination information pertaining to the computer and transmits the encrypted data with the header

3   to the computer.

1   29.   The computer system of claim 28 wherein said computer removes the header before

2   decrypting the encrypted data received from the storage device.

1   30.   The computer system of claim 27 wherein said computer encrypts data and transmits said

2   encrypted data to said storage device where said encrypted data is stored.

1   31.   The computer system of claim 30 wherein said computer creates a header containing

2   destination information pertaining to the storage device and transmits the encrypted data with the

3   header to the storage device.

1   32.   The computer system of claim 31 wherein the storage device removes the header before

2   storing the encrypted data.

1   33.   The computer system of claim 27 wherein the encrypted data retrieved by the storage

2   device is again encrypted and the storage device transmits the twice encrypted data across the

3   network to the computer.

1   34.   The computer system of claim 33 wherein the computer twice decrypts the twice encrypted

2   data received from the storage device.

1   35.   A method of transferring data between a computer and a non-volatile storage device, both

2   said computer and said storage device coupled to a network, comprising:

3   (a)   issuing a transmission command for data;

4   (b)   encrypting the data as part of the transmission process;

5   (c)   transmitting the encrypted data across a network to the storage device; and

6   (d)   storing the encrypted data on the storage device.

1   36.   The method of claim 35 wherein (a) includes encrypting the data with a dynamically

2   generated session key.

1   37.   The method of claim 36 further including retrieving the encrypted data from the storage

2   device, transmitting said encrypted data to the computer, and decrypting the encrypted data using

3   said session key.